

## SUMMARY OF WATER CONDITIONS

March 1, 2004

Two major storms in February have greatly improved the water supply outlook. All regions in the State benefited and it now appears that water supplies will be adequate for most users this year. The mid month storm which began on the holiday weekend on February 16 was especially wet as it had subtropical moisture input, producing moderate flood flows on many northern California streams. The snowpack gained substantially from the late storms near the end of the month and now exceeds the normal April 1 amounts in all west slope Sierra basins from the San Joaquin River north and is much above average in the North Coast region.

**Forecasts** of April through July runoff are near 100 percent overall, but still less in the south. Water year forecasts, assuming normal weather for the remaining months are somewhat less at 95 percent.

**Snowpack water content** increased by nearly half during the month and is 125 percent of average for this date and 110 percent of the April 1 average. (April 1 is the normal date of maximum accumulation.) The pack is well above average for March 1 in all regions, but not as much so in the south. Lower elevation snow courses are especially heavy and some of this snow may melt during March if warm weather occurs. Last year the snowpack was 80 percent at this time.

**Precipitation** from October 1 through February was about 105 percent of average, boosted by the wet month. Last year precipitation stood at 100 percent. Precipitation during February was 160 percent of average with all regions being above normal for the month.

**Runoff** for the first 5 months of this season has been about 90 percent of average compared to 100 percent last year. February runoff was 130 percent of average. Most of the Sacramento and North Coast region multipurpose reservoirs shifted into the flood control mode during the latter half of the month. Estimated runoff of the eight major rivers of the Sacramento and San Joaquin River regions during February was 3.9 million acre-feet.

**Reservoir storage** gained over 2 million acre-feet during the month and now is 105 percent of average compared to 100 percent last year. Regional percentages range from 115 in the North Coast to 45 in the North Lahontan where low Lake Tahoe levels depress the percentage.

## SUMMARY OF WATER CONDITIONS IN PERCENT OF AVERAGE

HYDROLOGIC REGION	PRECIPITATION OCTOBER 1 TO DATE	MARCH 1 SNOW WATER CONTENT	MARCH 1 RESERVOIR STORAGE	RUNOFF OCTOBER 1 TO DATE	APR-JULY RUNOFF FORECAST	WATER YEAR RUNOFF FORECAST
NORTH COAST	115	150	105	105	120	110
SAN FRANCISCO BAY	120	--	95	110	--	--
CENTRAL COAST	100	--	95	65	--	--
SOUTH COAST	65	--	75	30	--	--
SACRAMENTO RIVER	115	130	105	95	105	100
SAN JOAQUIN RIVER	100	120	100	55	95	85
TULARE LAKE	90	110	75	50	90	80
NORTH LAHONTAN	90	105	40	55	90	85
SOUTH LAHONTAN	120	110	95	65	85	75
COLORADO RIVER- DESERT	85	--	--	--	--	--
<b>STATEWIDE</b>	105	125	100	90	100	95

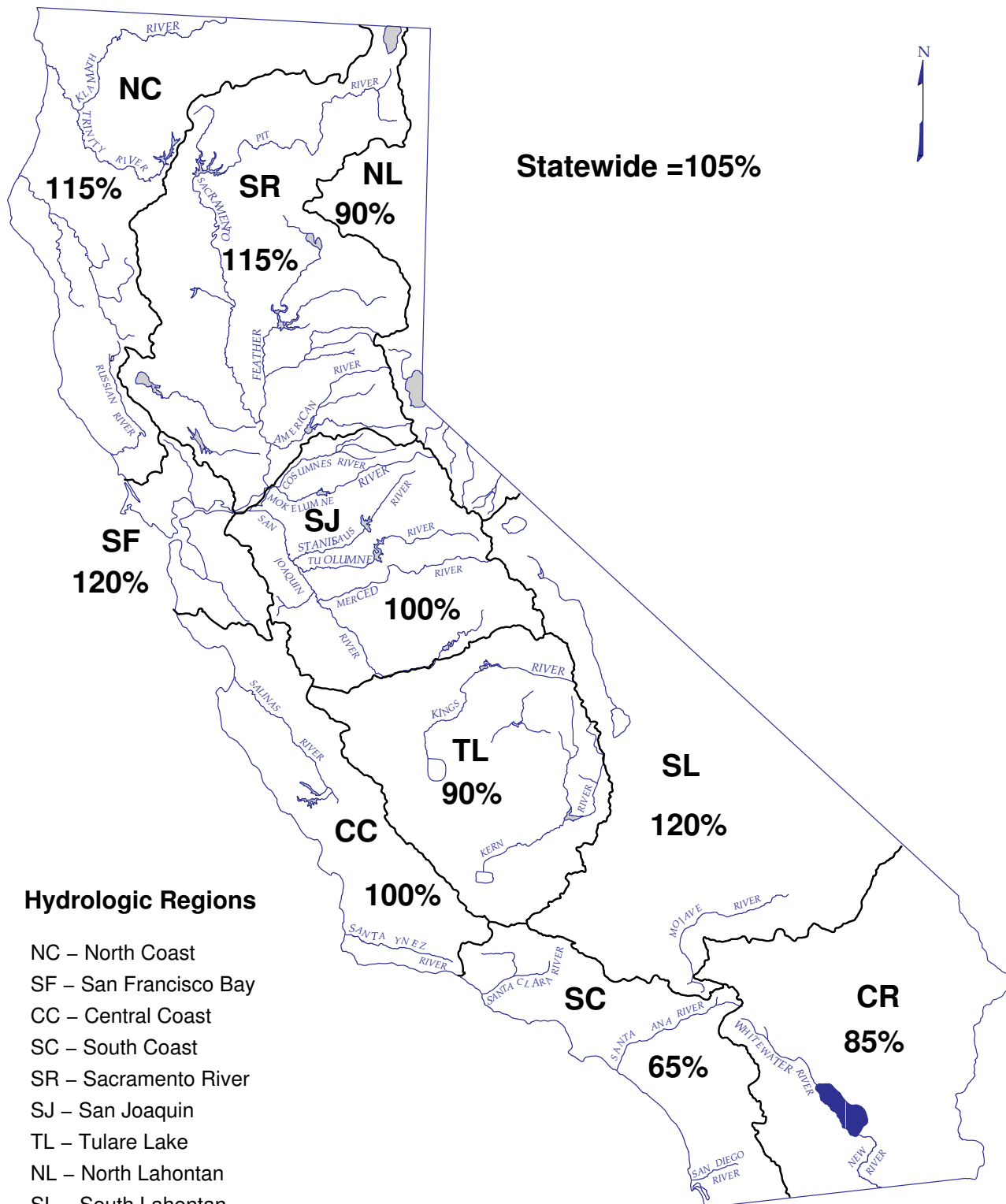
# DEPARTMENT OF WATER RESOURCES

## CALIFORNIA COOPERATIVE SNOW SURVEYS

### SEASONAL PRECIPITATION

IN PERCENT OF AVERAGE TO DATE

October 1, 2003 through February 28, 2004

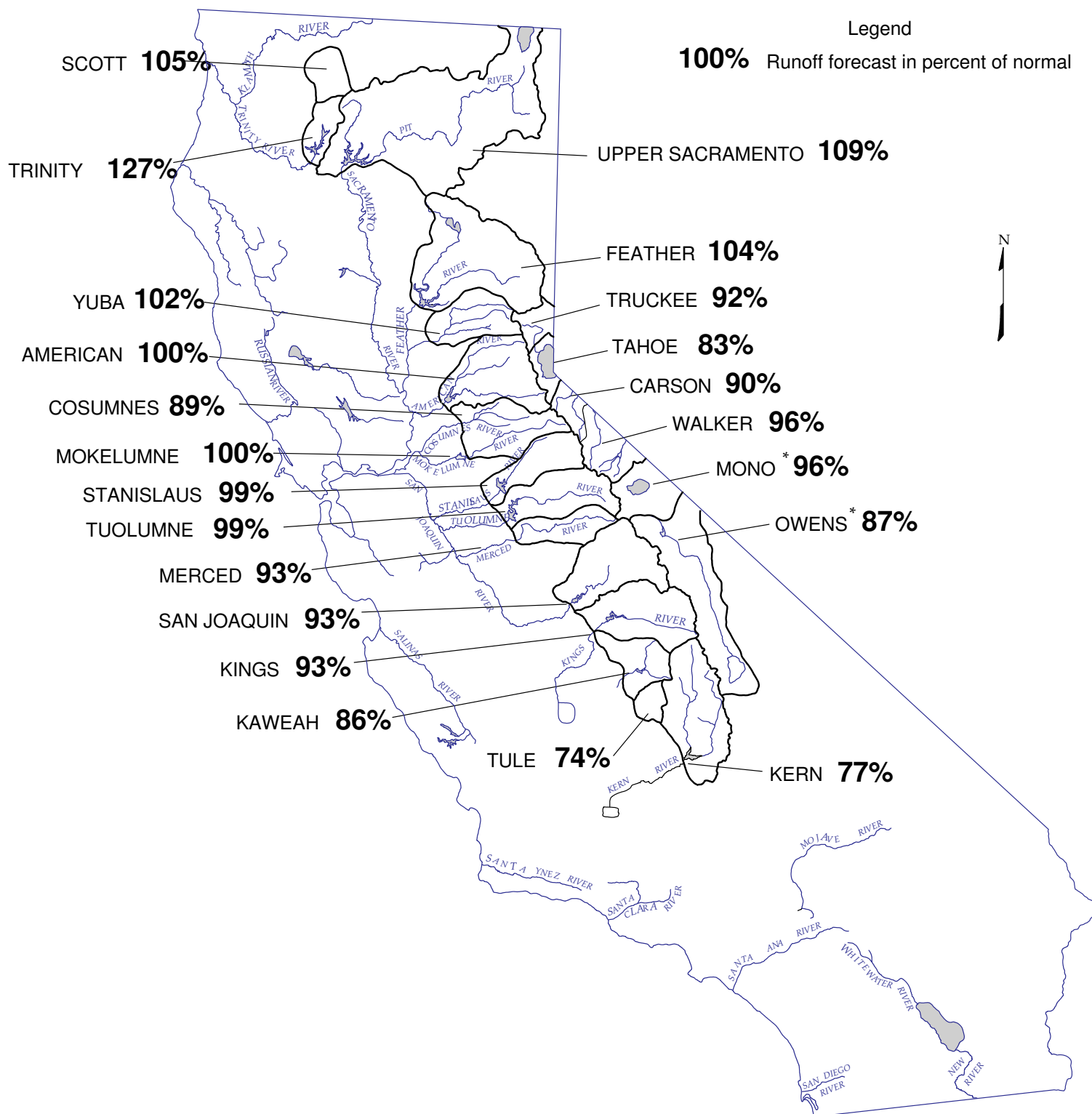


WATER YEAR IS OCTOBER 1 THROUGH SEPTEMBER 30

# DEPARTMENT OF WATER RESOURCES CALIFORNIA COOPERATIVE SNOW SURVEYS

## FORECAST OF APRIL – JULY UNIMPAIRED SNOWMELT RUNOFF

March 1, 2004



**MARCH 1, 2004 FORECASTS**  
**APRIL-JULY UNIMPAIRED RUNOFF**

HYDROLOGIC REGION and Watershed	Unimpaired Runoff in 1,000 Acre-Feet (1)					
	HISTORICAL			FORECAST		
	50 Yr Avg (2)	Max of Record	Min of Record	Apr-Jul Forecasts	Pct of Avg	80 % Probability Range (1)
<b>SACRAMENTO RIVER</b>						
<b>Upper Sacramento River</b>						
Sacramento River at Delta above Shasta Lake (3)	299	711	39	370	124%	
McCloud River above Shasta Lake	400	850	185	460	115%	
Pit River near Montgomery Creek + Squaw Creek	1,090	2,098	480	1,120	103%	
Total Inflow to Shasta Lake	1,849	3,525	726	<b>2,020</b>	109%	1,500 - 2,760
<b>Sacramento River above Bend Bridge, near Red Bluff</b>	2,521	5,075	943	<b>2,750</b>	109%	1,830 - 3,930
<b>Feather River</b>						
Feather River at Lake Almanor near Prattville (3)	333	675	120	340	102%	
North Fork at Pulga (3)	1,028	2,416	243	1,060	103%	
Middle Fork near Clio (4)	86	518	4	85	99%	
South Fork at Ponderosa Dam (3)	110	267	13	115	105%	
Feather River at Oroville	1,870	4,676	392	<b>1,940</b>	104%	1,265 - 2,900
<b>Yuba River</b>						
North Yuba below Goodyears Bar (3)	286	647	51	290	101%	
Inflow to Jackson Mdw and Bowman Reservoirs (3)	112	236	25	115	103%	
South Yuba at Langs Crossing (3)	233	481	57	230	99%	
Yuba River near Smartville plus Deer Creek	1,044	2,424	200	<b>1,070</b>	102%	640 - 1,770
<b>American River</b>						
North Fork at North Fork Dam (3)	262	716	43	260	99%	
Middle Fork near Auburn (3)	522	1,406	100	540	103%	
Silver Creek Below Camino Diversion Dam (3)	173	386	37	180	104%	
American River below Folsom Lake	1,282	3,074	229	<b>1,280</b>	100%	840 - 1,990
<b>SAN JOAQUIN RIVER</b>						
<b>Cosumnes River at Michigan Bar</b>	130	363	8	<b>115</b>	89%	65 - 215
<b>Mokelumne River</b>						
North Fork near West Point (5)	437	829	104	430	98%	
Total Inflow to Pardee Reservoir	469	1,065	102	<b>470</b>	100%	340 - 690
<b>Stanislaus River</b>						
Middle Fork below Beardsley Dam (3)	334	702	64	340	102%	
North Fork Inflow to McKays Point Dam (3)	224	503	34	230	103%	
Stanislaus River below Goodwin Reservoir (7)	716	1,710	116	<b>710</b>	99%	480 - 1,030
<b>Tuolumne River</b>						
Cherry Creek & Eleanor Creek near Hetch Hetchy (3)	322	727	97	310	96%	
Tuolumne River near Hetch Hetchy (3)	606	1,392	153	620	102%	
Tuolumne River below La Grange Reservoir (7)	1,230	2,682	301	<b>1,220</b>	99%	860 - 1,710
<b>Merced River</b>						
Merced River at Pohono Bridge (3)	362	888	80	350	97%	
Merced River below Merced Falls (7)	633	1,587	123	<b>590</b>	93%	420 - 890
<b>San Joaquin River</b>						
San Joaquin River at Mammoth Pool (6)	1,014	2,279	235	940	93%	
Big Creek below Huntington Lake (6)	95	264	11	85	89%	
South Fork near Florence Lake (6)	202	511	58	190	94%	
San Joaquin River inflow to Millerton Lake	1,262	3,355	262	<b>1,170</b>	93%	710 - 1,680
<b>TULARE LAKE</b>						
<b>Kings River</b>						
North Fork Kings River near Cliff Camp (3)	239	565	50	220	92%	
Kings River below Pine Flat Reservoir	1,234	3,113	274	<b>1,150</b>	93%	830 - 1,610
<b>Kaweah River below Terminus Reservoir</b>	290	814	62	<b>250</b>	86%	170 - 390
<b>Tule River below Lake Success</b>	65	259	2	<b>48</b>	74%	31 - 90
<b>Kern River</b>						
Kern River near Kernville (3)	373	1,203	83	300	80%	
Kern River inflow to Lake Isabella	470	1,657	84	<b>360</b>	77%	240 - 600

(1) See inside back cover for definition

(2) All 50 year averages are based on years 1951-2000 unless otherwise noted

(3) 50 year average based on years 1941-90

(4) 44 year average based on years 1936-79

(5) 36 year average based on years 1936-72

(6) 45 year average based on years 1936-81

**MARCH 1, 2004 FORECASTS**  
**WATER YEAR UNIMPAIRED RUNOFF**

HISTORICAL			Unimpaired Runoff in 1,000 Acre-Feet (1)								FORECAST		
50 Yr Avg (2)	Max of Record	Min of Record	Oct Thru Jan*	Feb *	Mar	Apr	May	Jun	Jul	Aug & Sep	Water Year Forecasts	Pct of Avg	80 % Probability Range (1)
888	1,965	165											
1,234	2,353	557											
3,217	5,150	1,484											
6,194	10,796	2,479	1,810	1,370	1,080	810	590	360	260	450	<b>6,730</b>	109%	5,815 - 8,035
8,990	17,180	3,294	2,940	2,305	1,400	1,140	810	475	325	545	<b>9,940</b>	111%	8,365 - 12,255
780	1,269	366											
2,417	4,400	666											
219	637	24											
291	562	32											
4,775	9,492	994	890	730	710	800	680	320	140	190	<b>4,460</b>	93%	3,510 - 5,870
564	1,056	102											
181	292	30											
379	565	98											
2,459	4,926	369	380	315	315	430	450	150	40	35	<b>2,115</b>	86%	1,600 - 3,045
616	1,234	66											
1,070	2,575	144											
318	705	59											
2,830	6,382	349	300	270	335	470	540	240	30	25	<b>2,210</b>	78%	1,645 - 3,120
409	1,253	20	38	47	55	60	40	12	3	2	<b>257</b>	63%	180 - 410
626	1,009	197											
774	1,800	129	60	45	70	145	210	100	15	5	<b>650</b>	84%	500 - 910
471	929	88											
1,196	2,952	155	100	75	120	220	310	150	30	15	<b>1,020</b>	85%	750 - 1,480
461	1,147	123											
770	1,661	258											
1,974	4,631	383	170	110	180	320	480	350	70	25	<b>1,705</b>	86%	1,300 - 2,330
461	1,020	92											
1,014	2,787	150	65	60	90	160	260	140	30	15	<b>820</b>	81%	630 - 1,180
1,337	2,964	308											
112	298	14											
248	653	71											
1,851	4,642	362	115	70	130	240	480	350	100	50	<b>1,535</b>	83%	1,020 - 2,230
284	607	58											
1,736	4,287	386	100	55	110	220	480	350	100	45	<b>1,460</b>	84%	1,090 - 1,990
460	1,402	94	34	18	35	65	110	60	15	8	<b>345</b>	75%	250 - 510
153	615	16	15	9	20	25	16	5	2	2	<b>94</b>	62%	65 - 160
558	1,577	163											
741	2,318	175	60	20	45	85	140	100	35	35	<b>520</b>	70%	370 - 820

\* Unimpaired runoff in prior months based on measured flows

(7) Forecast point names based on USGS gage names. Stanislaus below Goodwin also known as inflow to New Melones, Tuolumne River below La Grange also known as inflow to Don Pedro, Merced River below Merced Falls also known as inflow to McClure.

**MARCH 1, 2004 FORECASTS**  
**APRIL-JULY UNIMPAIRED RUNOFF**

HYDROLOGIC REGION and Watershed	Apr-Jul Unimpaired Runoff in 1,000 Acre-Feet (1)				
	HISTORICAL			FORECAST	
	50 Yr Avg (2)	Max of Record	Min of Record	Apr-Jul Forecasts	Pct of Avg

**NORTH COAST**

**Trinity River**

Trinity River at Lewiston Lake (3) 660 1,593 80 **840** 127%

**Scott River**

Scott River near Fort Jones 200 400 30 **210** 105%

**Klamath River**

Total inflow to Upper Klamath Lake (4) 515 939 149 **500** 97%

**NORTH LAHONTAN**

**Truckee River**

Lake Tahoe to Farad accretions 272 713 52 **250** 92%

Lake Tahoe Rise (assuming gates closed, in ft) 1.4 5.4 0.2 **1.2** 83%

**Carson River**

West Fork Carson River at Woodfords 55 135 12 **51** 92%

East Fork Carson River near Gardnerville 190 407 43 **170** 89%

**Walker River**

West Walker River below Little Walker, near Coleville 153 330 35 **150** 98%

East Walker River near Bridgeport 65 209 7 **60** 92%

**SOUTH LAHONTAN**

**Owens River**

Total tributary flow to Owens River (5) 235 579 96 **204** 87%

**MARCH 1, 2004 FORECASTS**  
**WATER YEAR UNIMPAIRED RUNOFF**

HYDROLOGIC REGION and Watershed	Water Year Unimpaired Runoff in 1,000 Acre-Feet (1)					
	HISTORICAL			FORECAST		
	50 Yr Avg (2)	Max of Record	Min of Record	Water Year Forecasts	Pct of Avg	80 % Probability Range (1)

**NORTH COAST**

**Trinity River**

Trinity River at Lewiston Lake (3) 1,411 2,990 200 **1,675** 119% 1360 - 2130

(1) See inside back cover for definition

(2) All 50 year averages are based on years 1951-2000 unless otherwise noted

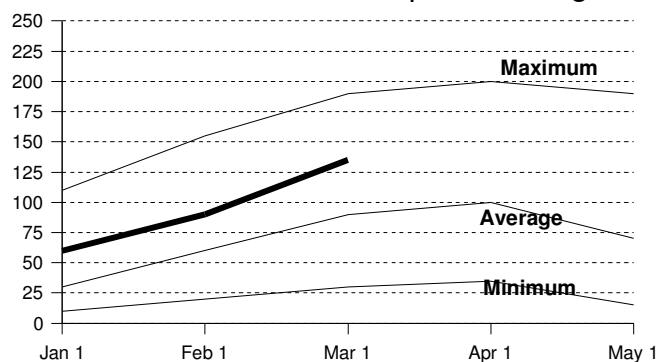
(3) Forecast by DWR and National Weather Service California-Nevada River Forecast Center.

(4) Forecast by U.S. Natural Resources Conservation Service and National Weather Service California-Nevada River Forecast Center. April through September forecast, 30 year average based on years 1971-2000.

(5) Forecast by Department of Water and Power, City of Los Angeles, average based on years 1951-2000.

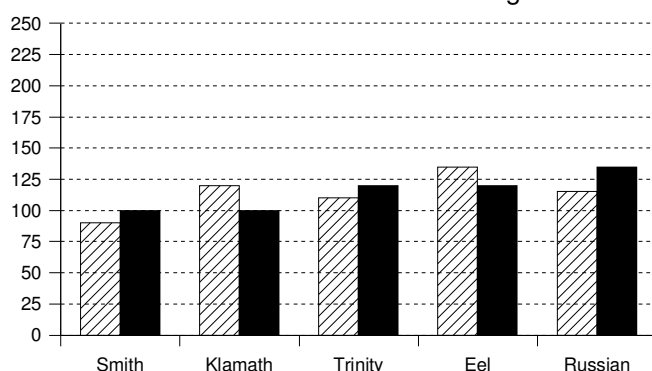
## Snowpack Accumulation

### Water Content in % of April 1 Average



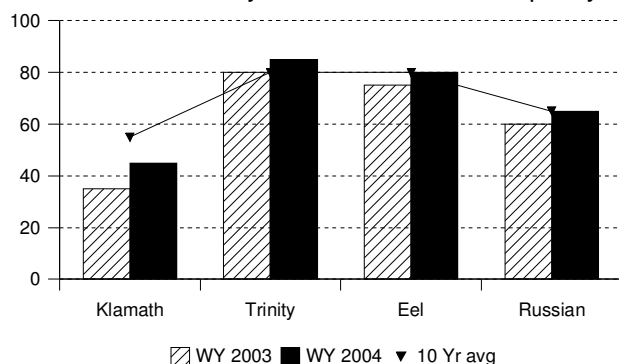
## Precipitation

### October 1 to date in % of Average



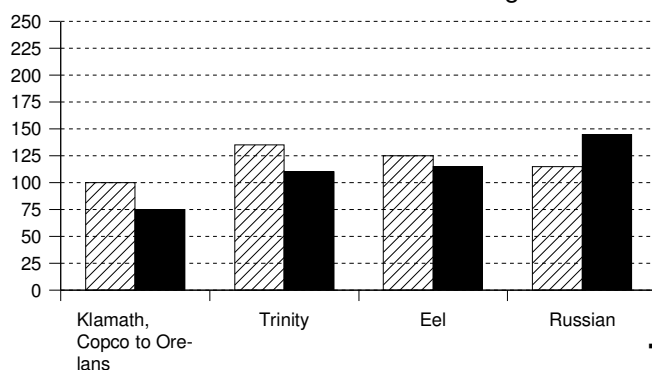
## Reservoir Storage

### Contents of major reservoirs in % of capacity



## Runoff

### October 1 to date in % of average



## NORTH COAST REGION

**SNOWPACK**- First of the month measurements made at 12 snow courses indicate an area wide snow water equivalent of 41.6 inches. This is 150 percent of the March 1 average and 135 percent of the seasonal (April 1) average. Last year at this time the pack was holding 32.2 inches of water.

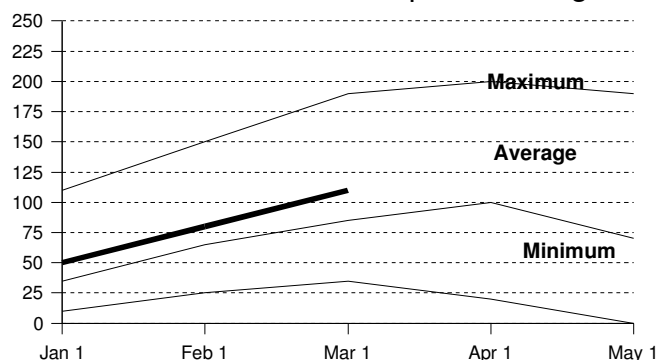
**PRECIPITATION** - Seasonal precipitation (October 1 through the end of last month) on this area was 115 percent of normal. Precipitation last month was about 165 percent of the monthly average. Seasonal precipitation at this time last year stood at 115 percent of normal.

**RESERVOIR STORAGE**- First of the month storage in 7 reservoirs was 2.5 million acre-feet which is 115 percent of average. About 85 percent of available capacity was being used. Storage in these reservoirs at this time last year was 105 percent of average.

**RUNOFF** -Seasonal runoff of streams draining the area totaled 8.2 million acre-feet which is 105 percent of the average for this period. Last year, runoff for the same period was 115 percent of average.

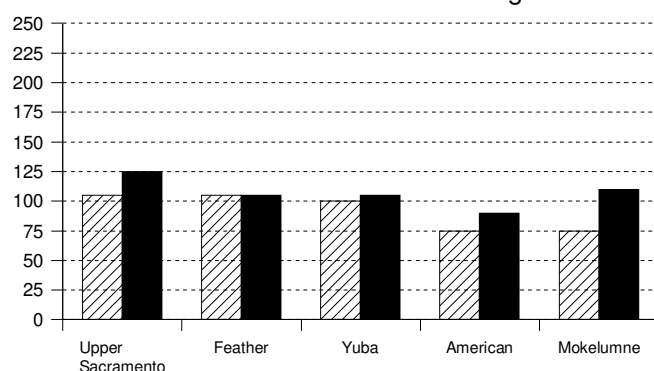
## Snowpack Accumulation

### Water Content in % of April 1 Average



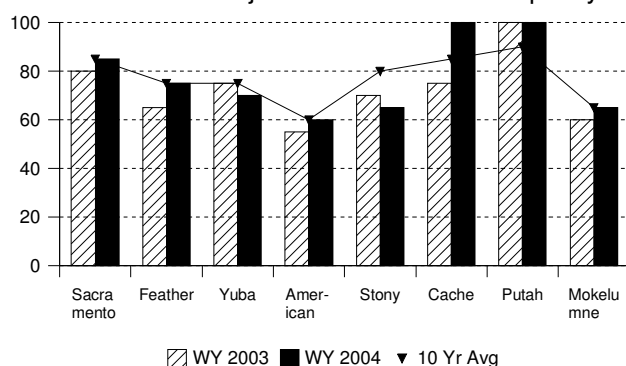
## Precipitation

### October 1 to date in % of Average



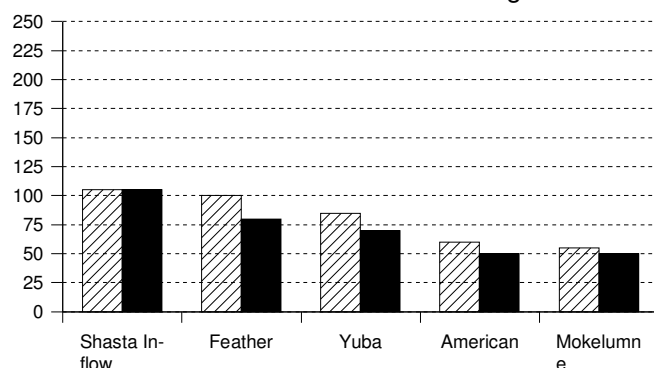
## Reservoir Storage

### Contents of major reservoirs in % of capacity



## Runoff

### October 1 to date in % of average



## SACRAMENTO RIVER REGION

**SNOWPACK**- First of the month measurements made at 68 snow courses indicate an area wide snow water equivalent of 34.6 inches. This is 130 percent of the March 1 average and 110 percent of the seasonal (April 1) average. Last year at this time the pack was holding 22.6 inches of water.

**PRECIPITATION** - Seasonal precipitation (October 1 through the end of last month) on this area was 115 percent of normal. Precipitation last month was about 165 percent of the monthly average. Seasonal precipitation at this time last year stood at 100 percent of normal.

**RESERVOIR STORAGE**- First of the month storage in 43 reservoirs was 12.7 million acre-feet which is 110 percent of average. About 80 percent of available capacity was being used. Storage in these reservoirs at this time last year was 105 percent of average.

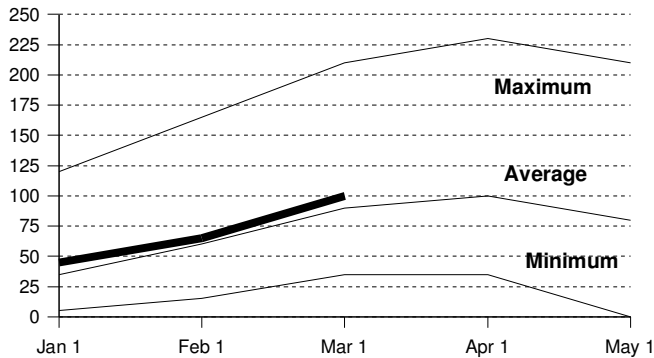
**RUNOFF** - Seasonal runoff of streams draining the area totaled 8.1 million acre-feet which is 95 percent of average for this period. Last year, runoff for the same period was 100 percent of average.

The **Sacramento Region 40-30-30 Water Supply Index** is forecast to be 8.5 assuming median meteorological conditions for the remainder of the year. This classifies the year as "above normal" in the Sacramento Valley according to the State Water Resources Control Board.



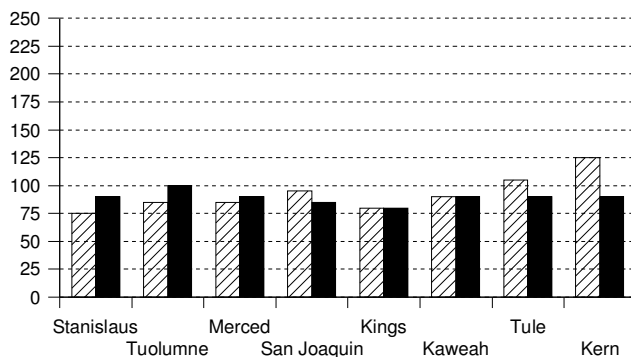
## Snowpack Accumulation

### Water Content in % of April 1 Average



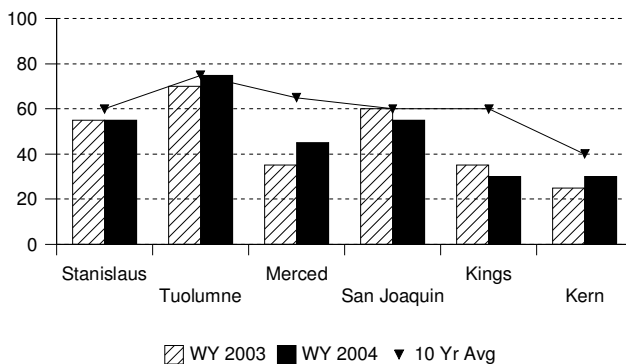
### Precipitation

#### October 1 to date in % of Average



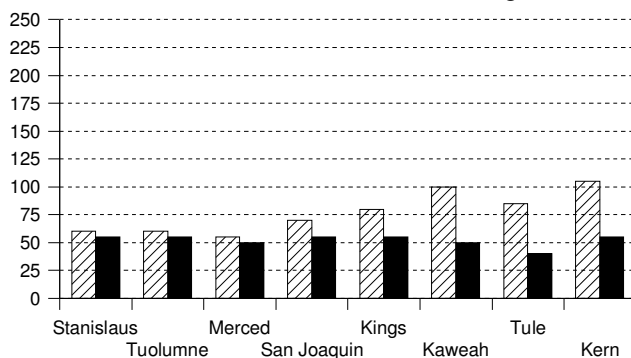
## Reservoir Storage

### Contents of major reservoirs in % of capacity



## Runoff

### October 1 to date in % of average



## SAN JOAQUIN RIVER AND TULARE LAKE REGIONS

**SNOWPACK**- First of the month measurements made at 59 **San Joaquin Region** snow courses indicate an area wide snow water equivalent of 33.0 inches. This is 120 percent of the March 1 average and 105 percent of seasonal (April 1) average. Last year at this time the pack was holding 21.5 inches of water.

At the same time 33 **Tulare Lake Region** snow courses indicated a basin-wide snow water equivalent of 23.1 inches which is 110 percent of the average for March 1 and 100 percent of the seasonal average. Last year at this time the basin was holding 14.8 inches of water.

**PRECIPITATION** - Seasonal precipitation (October 1 through the end of last month) on the **San Joaquin Region** was 100 percent of normal. Precipitation last month was about 140 percent of the monthly average. Seasonal precipitation at this time last year stood at 85 percent of normal. Seasonal precipitation on the **Tulare Lake Region** was 90 percent of normal. Precipitation last month was about 125 percent of the monthly average. Seasonal precipitation at this time last year stood at 100 percent of normal.

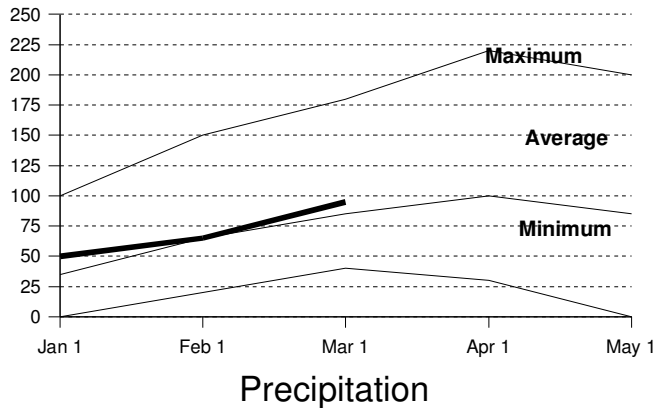
**RESERVOIR STORAGE**- First of the month storage in 34 **San Joaquin Region** reservoirs was 7.6 million acre-feet which is 105 percent of average. About 65 percent of available capacity was being used. Storage in these reservoirs at this time last year was 100 percent of average. First of the month storage in 6 **Tulare Lake Region** reservoirs was 604 thousand acre-feet which is 70 percent of average and about 30 percent of available capacity. Storage in these reservoirs at this time last year was 75 percent of average.

**RUNOFF**- Seasonal runoff of streams draining the **San Joaquin Region** totaled 956 thousand acre-feet which is 55 percent of average for this period. Last year, runoff for the same period was 60 percent of average. Seasonal runoff of streams draining the **Tulare Lake Basin** totaled 320 thousand acre-feet which is 50 percent of average for this period. Last year runoff for this same period was 90 percent of average.

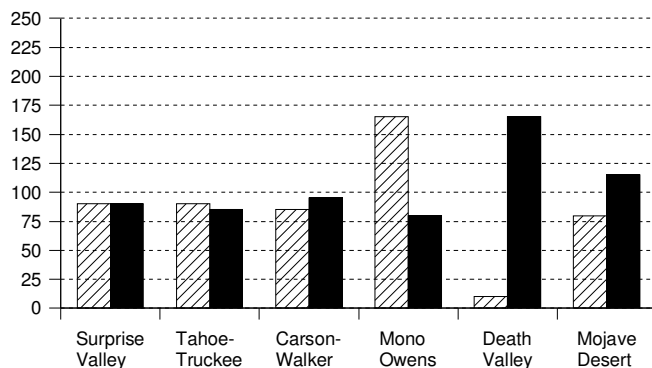
The **San Joaquin Region 60-20-20 Water Supply Index** is forecast to be 3.0 assuming median meteorological conditions. This classifies the year as "below normal" in the San Joaquin Region according to the State Water Resources Control Board.

## Snowpack Accumulation

### Water Content in % of April 1 Average

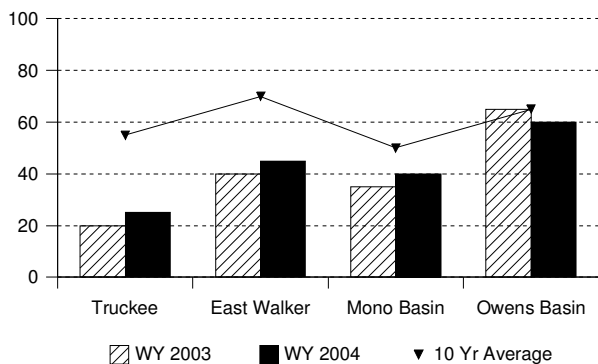


### Precipitation



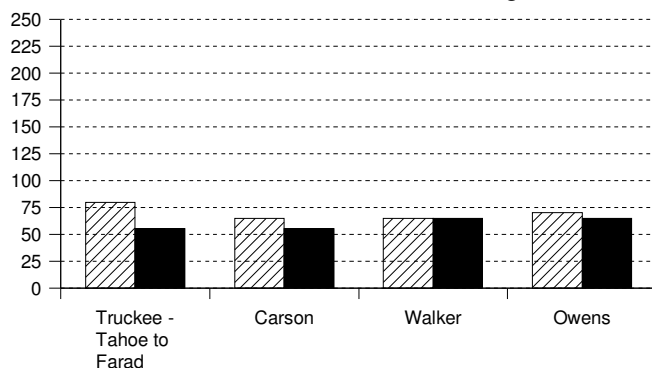
## Reservoir Storage

### Contents of major reservoirs in % of capacity



## Runoff

### October 1 to date in % of average



## NORTH AND SOUTH LAHONTAN REGIONS

**SNOWPACK**- First of the month measurements made at 11 **North Lahontan** snow courses indicate an area wide snow water equivalent of 29.4 inches. This is 105 percent of the March 1 average and 95 percent of seasonal (April 1) average. Last year at this time the pack was holding 21.3 inches of water. At the same time 19 **South Lahontan Region** snow courses indicated a basin-wide snow water equivalent of 19.4 inches which is 110 percent of the average for March 1 and 95 percent of the seasonal average. Last year at this time the basin was holding 15.5 inches of water.

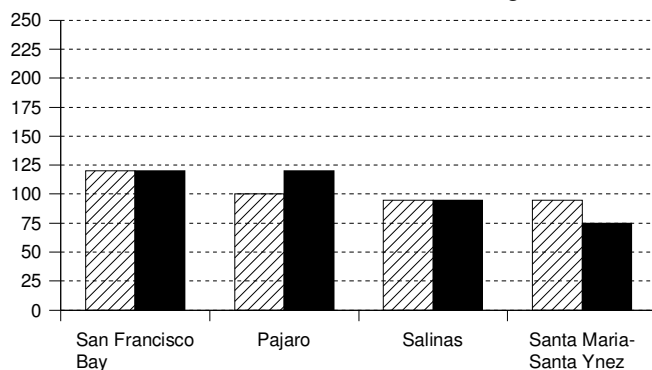
**PRECIPITATION** - Seasonal precipitation (October 1 through the end of last month) on the **North Lahontan** was 90 percent of normal. Precipitation last month was about 140 percent of the monthly average. Seasonal precipitation at this time last year stood at 90 percent of normal. Seasonal precipitation on the **South Lahontan** was 120 percent of normal. Precipitation last month was about 250 percent of the monthly average. Seasonal precipitation at this time last year stood at 120 percent of normal.

**RESERVOIR STORAGE**- First of the month storage in 5 **North Lahontan** reservoirs was 253 thousand acre-feet which is 45 percent of average. About 25 percent of available capacity was being used. Storage in these reservoirs at this time last year was 40 percent of average. Lake Tahoe was .7 feet above its natural rim on March 1. First of the month storage in 8 **South Lahontan** reservoirs was 253 thousand acre-feet which is 95 percent of average and about 65 percent of available capacity. Storage in these reservoirs at this time last year was 95 percent of average.

**RUNOFF**- Seasonal runoff of streams draining the **North Lahontan Region** totaled 123 thousand acre-feet which is 55 percent of average for this period. Last year, runoff for the same period was 70 percent of average. Seasonal runoff of the Owens River in the **South Lahontan Region** totaled 36 thousand acre-feet which is 65 percent of average for this period. Last year runoff for this same period was at 70 percent of average.

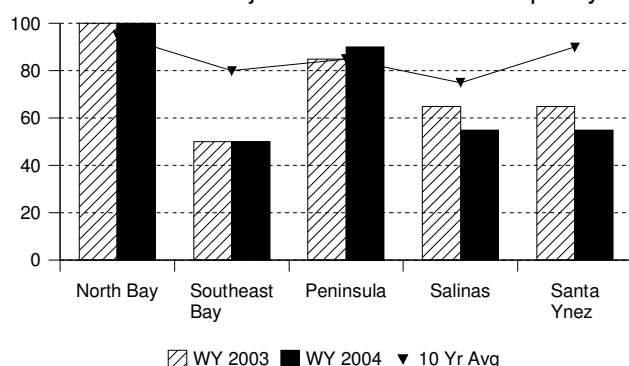
## Precipitation

October 1 to date in % of Average



## Reservoir Storage

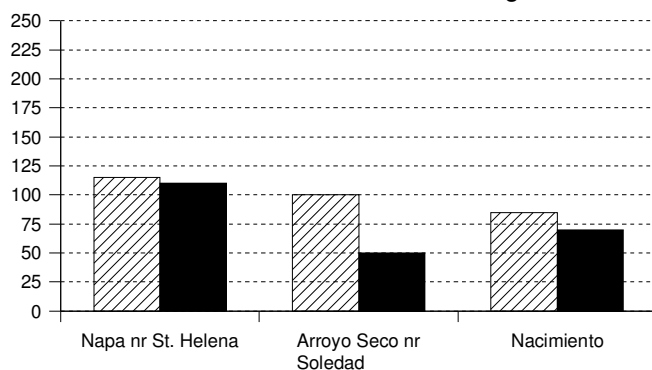
Contents of major reservoirs in % of capacity



▨ WY 2003 ■ WY 2004 ▼ 10 Yr Avg

## Runoff

October 1 to date in % of average



## SAN FRANCISCO BAY AND CENTRAL COAST REGIONS

**PRECIPITATION** - Seasonal precipitation (October 1 through the end of last month) on the **San Francisco Bay Region** was 120 percent of normal. Precipitation last month was about 170 percent of the monthly average. Seasonal precipitation at this time last year stood at 115 percent of normal. Seasonal precipitation on the **Central Coast Region** was 100 percent of normal. Precipitation last month was about 150 percent of the monthly average. Seasonal precipitation at this time last year stood at 95 percent of normal.

**RESERVOIR STORAGE** - First of the month storage in 14 **San Francisco Bay Region** reservoirs was 365 thousand acre-feet which is 95 percent of average. About 65 percent of available capacity was being used. Storage in these reservoirs at this time last year was 95 percent of average. First of the month storage in 6 **Central Coast Region** reservoirs was 541 thousand acre-feet which is 85 percent of average and about 55 percent of available capacity. Storage in these reservoirs at this time last year was 95 percent of average.

**RUNOFF** - Seasonal runoff of the Napa River in the **San Francisco Bay Region** totaled 60 thousand acre-feet which is 110 percent of average for this period. Last year, runoff for the same period was 115 percent of average. Seasonal runoff of streams draining the **Central Coast Region** totaled 137 thousand acre-feet which is 65 percent of average for this period. Last year runoff for this same period was 90 percent of average.

## **SOUTH COAST AND COLORADO RIVER REGIONS**

**PRECIPITATION** - October through February (seasonal) precipitation on the **South Coast Region** was 65 percent of normal. February precipitation was 135 percent of the monthly average. Seasonal precipitation at this time last year was 100 percent of normal. Seasonal precipitation on the **Colorado River-Desert Region** was 85 percent of normal and last year's seasonal precipitation on the **Colorado River-Desert Region** was 75 percent of normal. Precipitation in February was 320 percent of average.

**RESERVOIR STORAGE** - March 1 storage in 29 major **South Coast Region** reservoirs was 1.3 million acre-feet or 85 percent of average. About 65 percent of available capacity was being used. Storage in these reservoirs at this time last year was 75 percent of average. On March 1 combined storage in Lakes Powell, Mead, Mohave and Havasu was about 28 million acre-feet or about 65 percent of average. About 55 percent of available capacity was in use. Last year at this time, these reservoirs were storing about 32 million acre-feet.

**RUNOFF** - Seasonal runoff from selected **South Coast Region** streams totaled 9 thousand acre-feet which is 30 percent of average. Seasonal runoff from these streams last year was 35 percent of average.

**COLORADO RIVER** - The April -July inflow to Lake Powell is forecast to be 6.5 million acre-feet, which is 82 percent of average. The March 1 snowpack in the Upper Colorado River basin was 95 percent of average, highest in the San Juan at 105 percent and lowest in the Colorado Headwaters at 80 percent.

### **STATE WATER PROJECT**

Total storage in the major SWP reservoirs was about 4.5 MAF on February 29, 2004, compared with 3.7 MAF at this time in 2003. On February 29 storage at Lake Oroville was about 2.86 MAF as compared to about 2.27 MAF last year. The State's share of San Luis Reservoir storage at the end of February was 972 TAF, as compared to about 847 TAF at this time last year. The combined storage of SWP's southern reservoirs was about 670 TAF on February 29 as compared to 604 TAF at this time last year.

SWP water deliveries for February 2004 were about 385 TAF. This is a combination of project, transfer, and exchange waters. This was about 77 TAF more than February 2003. The Department increased its SWP allocation from 50% (2.06 MAF) to 65% (2.68 MAF) on March 1 due to greater than average precipitation during the first three weeks of February.

### **CENTRAL VALLEY PROJECT**

As of February 29, 2004, CVP storage was 8.9 million acre-feet, which is an increase of 0.6 million acre-feet compared to one year ago and is approximately 117% of normal for that date. The Bureau of Reclamation announced the initial water year 2004 supply allocation for the CVP contractors on February 13, 2004. Based on a conservative water supply forecast prepared from information available February 1, 2004, and a water year inflow into Shasta Reservoir of 4.4 million acre-feet, CVP water supplies were: Agricultural contractors North of Delta 100% and South of Delta 65%; Urban contractors North of Delta 100% and South of Delta 90%; Sacramento River water rights and San Joaquin Exchange Contractors 100%; Wildlife Refuges 100%; Friant Contractors 75% of Class 1 and 0% of Class 2. Updated allocations will be announced in mid-March. The forecast of CVP operations is available on the Mid-Pacific Region's website at [www.mp.usbr.gov](http://www.mp.usbr.gov).

# MAJOR WATER DISTRIBUTION PROJECTS

## RESERVOIR STORAGE

(AVERAGES BASED ON 1951-2000 OR PERIOD RECORD)

RESERVOIR	CAPACITY 1,000 AF	AVERAGE STORAGE 1,000 AF	2003 1,000 AF	STORAGE AT END OF February 2004 1,000 AF	PERCENT AVERAGE	PERCENT CAPACITY
<i>STATE WATER PROJECT</i>						
Lake Oroville	3,538	2,570	2,260	2,863	111%	81%
San Luis Reservoir (SWP)	1,062	944	837	972	103%	91%
Lake Del Valle	77	34	33	37	108%	48%
Lake Silverwood	73	65	70	71	109%	97%
Pyramid Lake	171	163	165	166	102%	97%
Castaic Lake	324	268	249	312	116%	96%
Perris Lake	132	117	114	122	104%	93%
<i>CENTRAL VALLEY PROJECT</i>						
Trinity Lake	2,448	1,853	1,940	2,106	114%	86%
Lake Shasta	4,552	3,342	3,584	3,869	116%	85%
Whiskeytown Lake	241	207	202	206	99%	85%
Folsom Lake	977	551	531	617	112%	63%
New Melones Reservoir	2,420	1,407	1,427	1,442	102%	60%
Millerton Lake	520	341	410	366	108%	70%
San Luis Reservoir (CVP)	971	798	902	907	114%	93%
<i>COLORADO RIVER PROJECT</i>						
Lake Mead	26,159	20,793	16,978	15,404	74%	59%
Lake Powell	25,002	19,028	12,833	10,537	55%	42%
Lake Mohave	1,810	1,679	1,728	1,716	102%	95%
Lake Havasu	619	547	573	556	102%	90%
<i>EAST BAY MUNICIPAL UTILITY DISTRICT</i>						
Pardee Res	198	180	167	180	100%	91%
Camanche Reservoir	417	246	306	317	129%	76%
East Bay (4 res.)	147	133	129	140	106%	95%
<i>CITY AND COUNTY OF SAN FRANCISCO</i>						
Hetch-Hetchy Reservoir	360	140	235	230	164%	64%
Cherry Lake	268	118	181	219	186%	82%
Lake Eleanor	26	11	3	7	67%	27%
Souty Bay/Peninsula (4 res.)	225	174	149	150	86%	67%
<i>CITY OF LOS ANGELES (D.W.P.)</i>						
Lake Crowley	183	126	123	116	92%	63%
Grant Lake	48	27	20	24	86%	50%
Other Aqueduct Storage (6 res.)	83	75	66	53	71%	64%

# TELEMETERED SNOW WATER EQUIVALENTS

March 1, 2004

(AVERAGES BASED ON PERIOD RECORD)

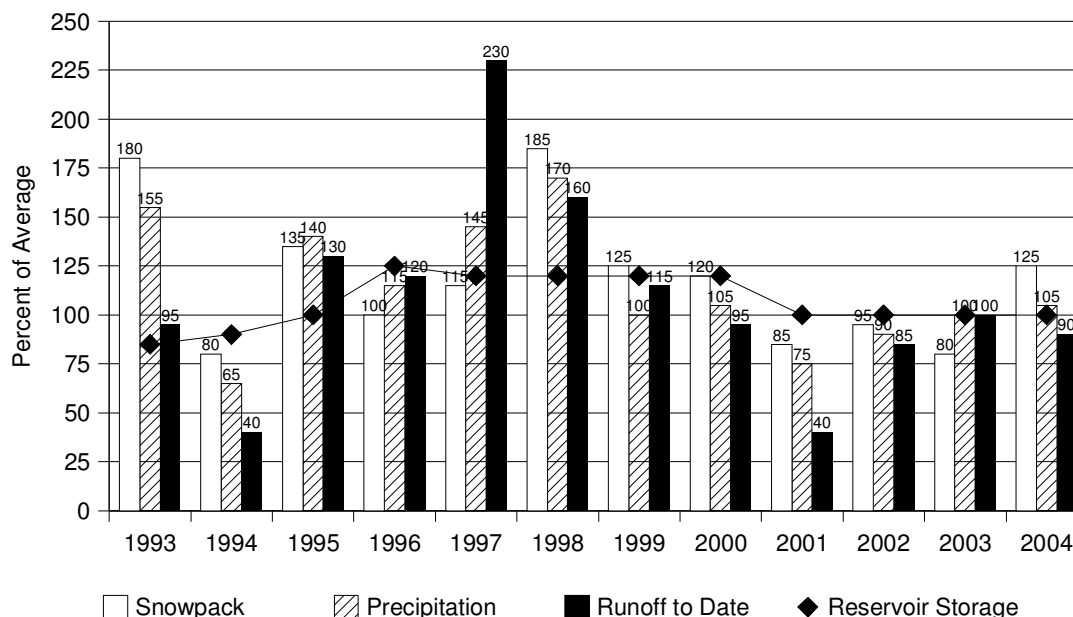
		INCHES OF WATER EQUIVALENT				
BASIN NAME		APRIL 1	PERCENT		24 HRS	1 WEEK
STATION NAME	ELEV	AVERAGE	Mar 1	OF AVERAGE	PREVIOUS	PREVIOUS
TRINITY RIVER						
Peterson Flat	7150'	29.2	34.7	119.0	34.1	30.7
Red Rock Mountain	6700'	39.6	61.6	155.6	61.0	51.8
Bonanza King	6450'	40.5	45.7	112.9	45.5	37.9
Shimmy Lake	6400'	40.3	—	—	73.0	63.0
Middle Boulder 3	6200'	28.3	36.2	128.1	35.6	29.1
Highland Lakes	6030'	29.9	—	—	—	—
Scott Mountain	5900'	16.0	29.9	186.8	29.4	22.9
Mumbo Basin	5650'	22.4	39.5	176.3	38.8	32.1
Big Flat	5100'	15.8	28.0	177.5	27.6	22.5
SACRAMENTO RIVER						
Cedar Pass	7100'	18.1	21.1	116.6	20.5	19.1
Blacks Mountain	7050'	12.7	16.7	131.7	16.6	14.3
Sand Flat	6750'	42.4	46.8	110.3	46.2	38.5
Medicine Lake	6700'	32.6	41.9	128.5	41.3	36.1
Adin Mountain	6200'	13.6	17.0	125.0	16.8	15.1
Snow Mountain	5950'	27.0	41.8	154.7	41.8	34.9
Slate Creek	5700'	29.0	38.3	132.2	37.9	27.3
Stouts Meadow	5400'	36.0	49.3	136.9	48.3	36.8
FEATHER RIVER						
Kettle Rock	7300'	25.5	29.5	115.8	29.4	25.2
Grizzly Ridge	6900'	29.7	29.8	100.2	29.5	25.0
Pilot Peak	6800'	52.6	38.9	73.9	38.9	29.0
Gold Lake	6750'	36.5	36.7	100.6	36.5	31.2
Humbug	6500'	28.0	48.5	173.3	48.5	41.3
Rattlesnake	6100'	14.0	31.6	225.4	31.4	25.0
Bucks Lake	5750'	44.7	59.3	132.6	58.9	49.9
Four Trees	5150'	20.0	37.9	189.6	37.7	32.8
EEL RIVER						
Noel Spring	5100'	—	11.7	—	11.8	7.9
YUBA & AMERICAN RIVERS						
Lake Lois	8600'	39.5	40.3	102.1	40.3	34.0
Schneiders	8750'	34.5	38.4	111.3	38.3	31.5
Caples Lake	8000'	30.9	30.7	99.4	30.6	26.4
Alpha	7600'	35.9	33.7	93.9	33.7	28.0
Meadow Lake	7200'	55.5	52.6	94.8	52.5	45.0
Silver Lake	7100'	22.7	29.5	130.0	29.5	25.1
Central Sierra Snow Lab	6900'	33.6	38.3	114.0	38.3	32.7
Huysink	6600'	42.6	33.0	77.5	32.9	27.1
Van Vleck	6700'	35.9	—	—	—	—
Robbs Saddle	5900'	21.4	25.0	116.8	25.0	19.3
Greek Store	5600'	21.0	26.9	128.0	26.8	21.8
Blue Canyon	5280'	9.0	20.9	232.6	20.8	15.5
Robbs Powerhouse	5150'	5.2	18.5	355.8	18.5	14.6
MOKELUMNE & STANISLAUS RIVERS						
Deadman Creek	9250'	37.2	25.8	69.5	25.6	22.4
Highland Meadow	8700'	47.9	37.6	78.4	37.3	32.6
Gianelli Meadow	8400'	55.5	41.0	73.9	40.9	35.5
Lower Relief Valley	8100'	41.2	40.5	98.2	40.4	35.4
Blue Lakes	8000'	33.1	28.2	85.2	28.1	24.1
Mud Lake	7900'	44.9	47.2	105.2	47.0	40.0
Stanislaus Meadow	7750'	47.5	46.5	97.9	46.3	40.3
Bloods Creek	7200'	35.5	—	—	—	—
Black Springs	6500'	32.0	30.5	95.3	30.5	25.1
TUOLUMNE & MERCED RIVERS						
Tioga Pass Entrance	9945'	—	—	—	—	—
Dana Meadows	9800'	27.7	—	—	—	—
Slide Canyon	9200'	41.1	37.3	90.9	37.3	32.8
Lake Tenaya	8150'	33.1	28.4	85.8	28.4	24.4
Tuolumne Meadows	8600'	22.6	19.4	85.9	19.4	16.3
Horse Meadow	8400'	48.6	38.0	78.1	38.0	32.1
Ostrander Lake	8200'	34.8	28.7	82.5	28.1	23.5
Paradise Meadow	7650'	41.3	42.9	104.0	42.9	37.1
Gin Flat	7050'	34.2	27.5	80.4	27.5	22.7
Lower Kibbie Ridge	6700'	27.4	20.8	75.8	20.7	16.8

BASIN NAME		INCHES OF WATER EQUIVALENT				
STATION NAME	ELEV	APRIL 1 AVERAGE	PERCENT Mar 1 OF AVERAGE	24 HRS PREVIOUS	1 WEEK PREVIOUS	
SAN JOAQUIN RIVER						
Volcanic Knob	10050'	30.1	24.9	82.6	24.9	20.9
Agnew Pass	9450'	32.3	24.4	75.5	24.4	19.2
Kaiser Point	9200'	37.8	30.8	81.5	30.7	23.6
Green Mountain	7900'	30.8	27.0	87.7	27.0	22.8
Tamarack Summit	7550'	30.5	26.2	85.8	26.2	21.1
Chilkoot Meadow	7150'	38.0	34.3	90.3	34.2	27.8
Huntington Lake	7000'	20.1	19.8	98.5	19.8	15.8
Graveyard Meadow	6900'	18.8	22.1	117.4	22.1	17.9
Poison Ridge	6900'	28.9	—	—	—	—
KINGS RIVER						
Bishop Pass	11200'	34.0	23.9	70.4	23.9	19.4
Charlotte Lake	10400'	27.5	31.3	113.9	31.3	26.5
State Lakes	10300'	29.0	30.6	105.5	30.5	24.9
Mitchell Meadow	9900'	32.9	—	—	—	—
Blackcap Basin	10300'	34.3	27.3	79.6	27.1	22.1
Upper Burnt Corral	9700'	34.6	28.2	81.5	28.2	23.0
West Woodchuck Meadow	9100'	32.8	30.5	93.0	30.4	24.4
Big Meadows	7600'	25.9	27.1	104.7	27.0	21.2
KAWEAH & TULE RIVERS						
Farewell Gap	9500'	34.5	32.7	94.9	32.7	26.9
Quaking Aspen	7200'	21.0	20.5	97.7	20.5	16.1
Giant Forest	6650'	10.0	13.1	131.0	13.0	8.9
KERN RIVER						
Upper Tyndall Creek	11400'	27.7	18.5	66.8	18.5	15.3
Crabtree Meadow	10700'	19.8	13.7	69.1	13.6	10.8
Chagoopa Plateau	10300'	21.8	17.0	77.9	17.0	14.4
Pascoes	9150'	24.9	32.0	128.5	31.9	26.9
Tunnel Guard Station	8900'	15.6	12.5	80.3	12.5	9.4
Wet Meadows	8950'	30.3	—	—	—	—
Casa Vieja Meadows	8300'	20.9	19.7	94.1	19.7	15.7
Beach Meadows	7650'	11.0	14.3	129.8	14.3	10.9
SURPRISE VALLEY AREA						
Dismal Swamp	7050'	29.2	31.9	109.2	31.4	29.9
TRUCKEE RIVER						
Mount Rose Ski Area	8900'	38.5	35.2	91.4	35.2	29.8
Independence Lake	8450'	41.4	41.6	100.5	41.4	35.8
Big Meadows	8700'	25.7	19.7	76.7	19.6	15.9
Squaw Valley	8200'	46.5	48.2	103.7	48.2	43.5
Independence Camp	7000'	21.8	17.3	79.4	17.3	13.5
Independence Creek	6500'	12.7	15.7	123.6	15.6	12.4
Truckee 2	6400'	14.3	19.3	135.0	19.2	15.4
LAKE TAHOE BASIN						
Heavenly Valley	8800'	28.1	23.3	82.9	23.2	19.2
Hagans Meadow	8000'	16.5	17.1	103.6	16.9	13.7
Marlette Lake	8000'	21.1	22.0	104.3	22.0	19.1
Echo Peak 5	7800'	39.5	43.6	110.4	43.6	37.6
Rubicon Peak 2	7500'	29.1	27.0	92.8	26.9	22.0
Tahoe City Cross	6750'	16.0	16.2	101.2	16.1	12.0
Ward Creek 3	6750'	39.4	38.8	98.5	38.6	31.1
Fallen Leaf Lake	6250'	7.0	11.0	157.1	10.9	8.3
CARSON RIVER						
Ebbetts Pass	8700'	38.8	36.4	93.8	36.2	31.3
Poison Flat	7900'	16.2	19.6	121.0	19.6	16.9
Monitor Pass	8350'	—	15.3	—	15.3	12.9
Spratt Creek	6150'	4.5	7.7	171.1	7.7	5.5
WALKER RIVER						
Leavitt Lake	9600'	—	55.3	—	55.3	49.3
Virginia Lakes	9300'	20.3	14.8	72.9	14.8	12.8
Lobdell Lake	9200'	17.3	15.6	90.2	15.4	12.7
Sonora Pass Bridge	8750'	26.0	25.1	96.5	25.0	21.3
Leavitt Meadows	7200'	8.0	14.5	181.2	14.4	11.3
OWENS RIVER/MONO LAKE						
Gem Pass	10750'	31.7	34.5	108.7	34.2	28.4
Sawmill	10200'	19.4	14.7	75.8	14.7	12.0
Cottonwood Lakes	10150'	11.6	11.8	101.7	11.8	8.3
Big Pine Creek	9800'	17.9	12.6	70.4	12.6	10.0
South Lake	9600'	16.0	15.6	97.5	15.6	13.2
Mammoth Pass	9300'	42.4	34.8	82.1	34.7	29.9
Rock Creek Lakes	10000'	14.0	12.5	89.1	12.5	9.1

NORMAL SNOWPACK ACCUMULATION EXPRESSED AS A PERCENT OF APRIL 1ST AVERAGE

AREA	JANUARY	FEBRUARY	MARCH	APRIL	MAY
Central Valley North	45%	70%	90%	100%	75%
Central Valley South	45%	65%	85%	100%	80%
North Coast	40%	60%	85%	100%	80%

## March 1 Statewide Conditions



## SNOWLINES

**The 72<sup>nd</sup> Western Snow Conference (WSC)** will be held in Richmond, British Columbia 19-22 April 2004, hosted by the North Pacific Region. Offering a great opportunity, the call for papers has been extended until mid March. For further information regarding the Western Snow Conference contact Frank Gehrke at 916-574-2635 or [gridley@water.ca.gov](mailto:gridley@water.ca.gov). Information is available on the web at <http://www.westernsnowconference.org>

**DEPICTED** on this months cover is another photograph courtesy of Gene Rose. In this scene the two snow surveyors are using a large diameter tube, probably about 6 inch diameter to obtain the core sample, which would then be weighed on the platform scale adjacent to the foot of the uphill gauger. Given our current difficulty in finding replacement springs for the hanging scales in use today this approach may be revisited.